

New York State Department of Transportation

Yellow Flag NB22CTW001

By: Rehan Afridi

Flag Date: March 16, 2022

Superseding Information:

This flag supersedes: YF NB2158W018

Structure Information

BIN: 1065318

Feature Carried: 278I278IX2M23027

Feature Crossed: 6TH AVENUE

Orientation: 8 - NORTHWEST

Region: 11 - NEW YORK CITY

County: KINGS

Political Unit: City of NEW YORK

Approximate Year Built: 1962

Posted Load Matches Inventory : Yes

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 322

Verbal Notification Information

Person Notified: Heinz Joachim, P.E.

Date: March 16, 2022 1:00:00 PM

Of: NYSDOT Region 11

Signature Information

Signature: Rehan Afridi, P.E. 075185

Date: April 01, 2022

Reviewed By: Robert Kemp

Date: April 01, 2022

Attachments: 6

Flagged Elements

Parent Element	Element	Total Quantity	Unit
Span Number : 123			
	107 - Steel Open Girder/Beam	781	ft
	PR831 - Steel Beam End	34	each

Flagged Condition Description

Yellow Flag NB22CTW001 supersedes previously issued Yellow Flag NB2158W018.

Location: Span 123 Girder G13 at Pier 122

Description: The end of Girder G13 in Span 123 at Pier 122 exhibits severe corrosion resulting in an overall web bearing area section loss of approximately 31% (previously 35%) and an overall shear web area section loss of approximately 44% (previously 42%) with an average overall localized section loss of approximately 41% (no change) for 5''L x 6''H area directly above the bearing below the guide angle (Photo 2). The end of the girder web exhibits two corrosion holes; a 2" diameter hole adjacent to the middle pre-drilled guide angle hole and a 3''L x 1''W hole adjacent to the top pre-drilled guide angle hole (Photos 3 and 4). Also, the lower web of the girder adjacent to the web bearing area exhibits an average section loss up to 30% for 24''L x 3''H above the bottom flange. There is no significant change in the condition since the previous inspection. (Refer to sketch for more details).

This girder is located above an expansion bearing.

Notes:

1. Both edges of the Girder G13 bottom flange exhibit up to 25% section loss for 18''L x 3''W in front of the bearing. The condition is the same as reported in the previous inspection.
2. The adjacent Girders G12 and G14 have previously installed steel reinforcement plates and angles at the end of the girders.
3. The left guide angle exhibits four corrosion holes for 1" diameter, two 2" diameter holes, and 3" diameter. The right guide angle exhibits one corrosion hole for 4''L x 2''W at the top of the angle. The condition is the same as reported in the last inspection.
4. The flagged condition is located above the left lane on 3rd Avenue EB roadway and was accessed using a 30ft bucket truck with double left lane closure.

Flag Photographs

Photo Number: 1

Photo Filename: Photo 1-RA_601-0062-edited.jpg



Attachment Description: General view of the flagged condition at Girder G13 in Span 123 at Pier 122. Looking Begin and Right.

Photo Number: 2

Photo Filename: RA_601-0065.JPG



Attachment Description: The left face of Girder G13 in Span 123 at Pier 122. The end of the girder exhibits severe section loss at the lower web above the bottom flange and web adjacent to the guide angle. Looking Right.

Photo Number: 3

Photo Filename: RA_601-0072.JPG



Attachment Description: The left face of Girder G13 in Span 123 at Pier 122. The end of the girder web exhibits a corrosion hole behind the guide angle adjacent to the middle pre-drilled hole. Looking Right.

Photo Number: 4

Photo Filename: RA_601-0074.JPG



Attachment Description: The left face of Girder G13 in Span 123 at Pier 122. The end of the girder web exhibits corrosion holes behind the guide angle adjacent to the middle and top pre-drilled holes. Looking Right.

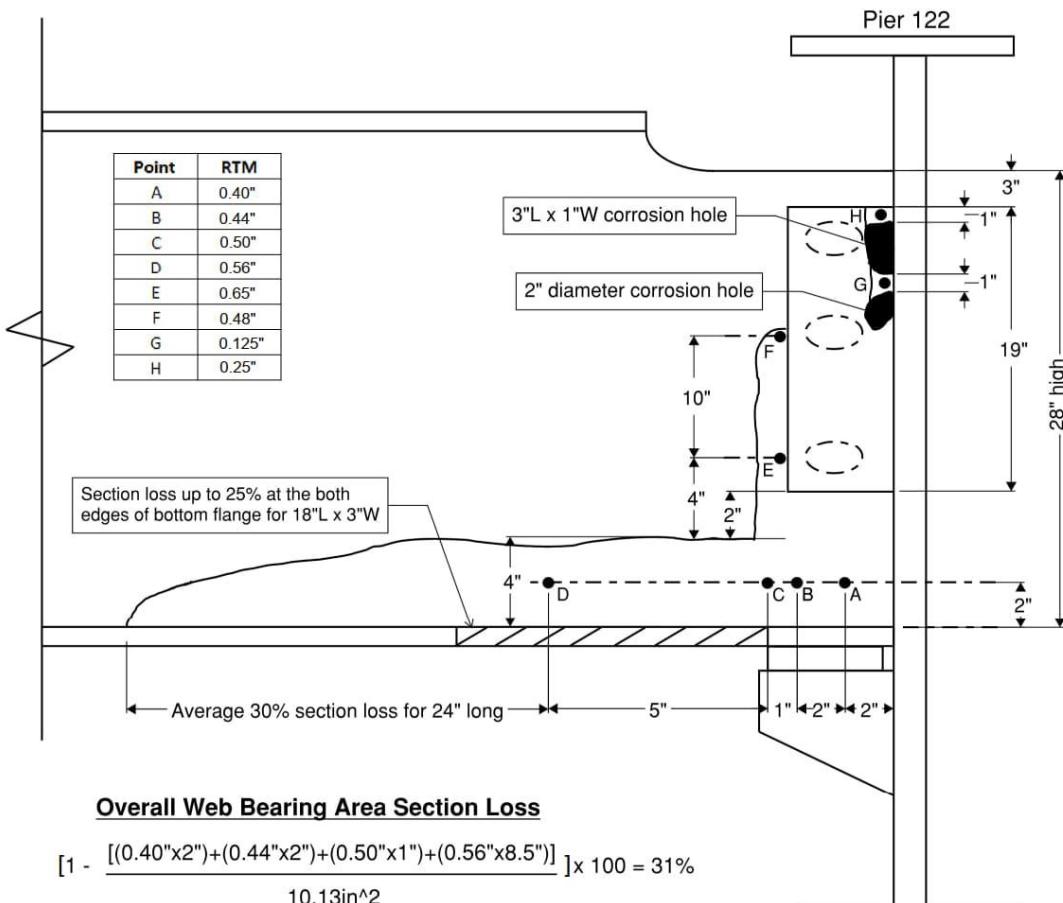
Photo Number: 5

Photo Filename: 22YF_Span 123_G13 Sketch Rev. 04.01.jpg

Left Face of Girder G13 Sketch in Span 123 at Pier 122
N.T.S.

DATE 03/16/2022

TEAM LEADER Rehan Afzadi, P.E. ASSISTANT TEAM LEADER Marcos Perez



Overall Web Bearing Area Section Loss

$$[1 - \frac{[(0.40'' \times 2'') + (0.44'' \times 2'') + (0.50'' \times 1'') + (0.56'' \times 8.5'')]}{10.13 \text{ in}^2}] \times 100 = 31\%$$

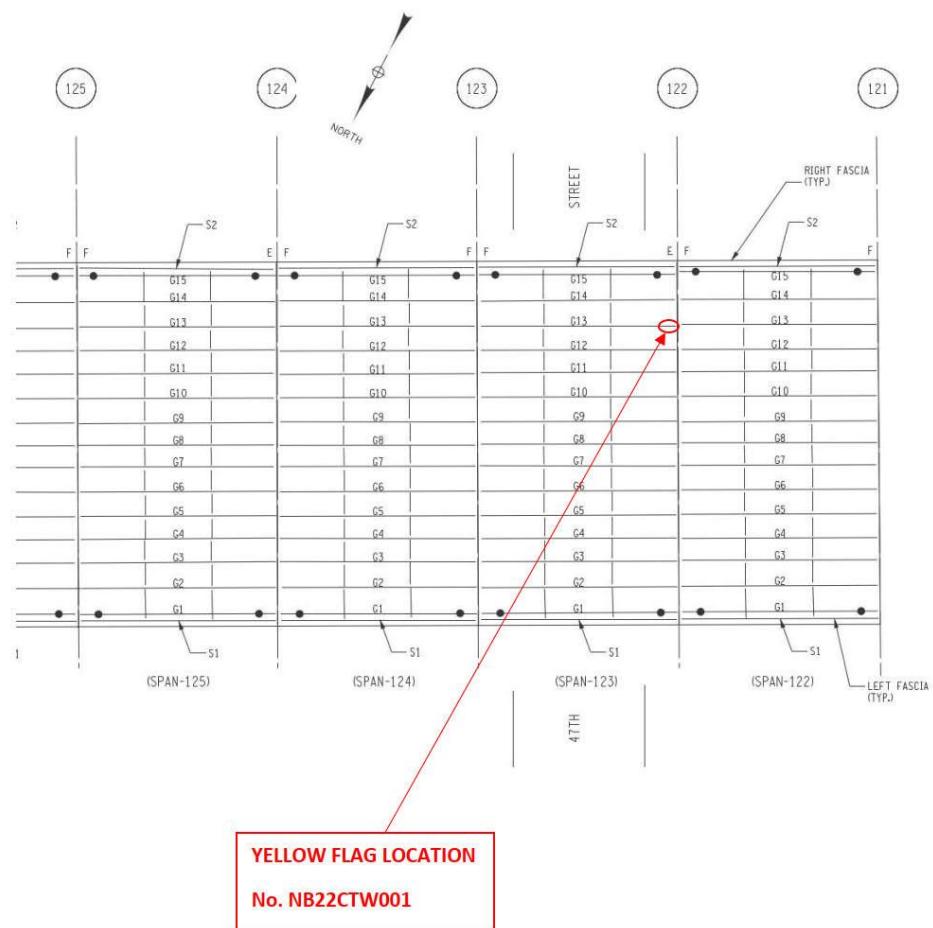
Overall Shear Web Area Section Loss

$$[1 - \frac{[(0.40'' \times 4'') + (0.65'' \times 4'') + (0.48'' \times 10'') + (2'' \times 0'') + (0.125'' \times 1'') + (3'' \times 0'') + (0.25'' \times 1'') + (0.75'' \times 3'')]}{21 \text{ in}^2}] \times 100 = 44\%$$

Notes:

- As-built web thickness = 0.75"
- Length of bearing area = 18 x web thickness = 18 x 0.75" = 13.50"
- Overall bearing area = 13.50" x 0.75" = 10.13 in²
- As-built shearing web area = 28" x 0.75" = 21 in²
- Adjacent Girders G12 and G14 have previously installed steel reinforcement plates and angles at the end of the girder.
- Left guide angle at Girder G13 exhibits four corrosion holes for 1" diameter, two 2" diameter holes, and 3" diameter. These defects are not shown in the sketch for clarity purposes to display girder defects.

Attachment Description: YF SN 123 G13 Sketch

Photo Number: **6**Photo Filename: **YF NB22CTW001 Framing Plan.jpg****Attachment Description: YF SN 123 G13 Framing Plan**